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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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EXAMINER	
BARRON JR, G	
ART UNIT	PAPER NUMBER
222	6

DATE MAILED:

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

07/18/89

☐ This application has been examined ☒ Responsive to communication filed on 5/25/89 ☒ This action is made final.

A ~~shortened~~ statutory period for response to this action is set to expire 6 month(s), 45 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.       | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449             | 4. <input type="checkbox"/> Notice of informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/>   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-39 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☒ Claims 1-4, 15, 17, 10, 20-24, 35 and 37 are rejected.
5. ☒ Claims 5-9, 11-14, 16, 18-19, 25-29, 31-34, 36 and 38-39 are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are ☐ acceptable;  
☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections **MUST** be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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SECURITY ORDER, as defined by E.O. 12812  
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1. The amendment filed on 25 May 1989 has been carefully reviewed and considered, but is not deemed to place the claims in condition for allowance.

2. The text of those sections of Title 35 U. S. Code not included in this action can be found in a prior Office action.

3. Claims 1-4, 15, 20-24 and 35 are rejected under 35 U.S.C. 103 as being unpatentable over Gendreu or Rawicz in view of Golinski.

Both Gendreu and Rawicz relate to tracking systems that include means for generating model data, Gendreu with simulating circuits #17 and Rawicz with position computing apparatus #22. Both references collect actual flight path data, Gendreu with a radar and Rawicz with sensor #10. Both generate an error measurement, Gendreu with tracking unit #5 and Rawicz with mixer #12. Both adjust the model data to reduce the error with loop feedback paths. Both calculate range at output of the model data generators.

The difference between the instant claims and Gendreu or Rawicz is that the prior art patents utilize active means for collecting actual flight data while the instant claims recite a passive method or means. Further, claims 15 and 35 differ from Gendreu or Rawicz in providing for adjustment of flight path of the monitoring plane.

The Golinski patent relates to a passive system of ranging. The patent teaches that the monitoring plane's flight path is adjusted to provide better ranging performance.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize passive means as taught in Golinski instead of active means as shown in Gendrea or Rawicz for collecting actual flight path data in order to avoid detection by third parties or the target plane, col. 1, 1. 27-32.

It would also have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Gendreu or Rawicz to include adjustment of the monitoring plane flight path as taught in Golilnski in order to improve the on ranging determination.

4. Claims 17 and 37 are rejected under 35 U.S.C. 103 as being unpatentable over Gendrea or Rawicz in view of Golinski as applied to claims 1-4, 15, 20-24 and 35 above, and further in view of Fukuhara et al.

The instant claims differ from Gendrea or Rawicz in view of Golinski in further providing "generating initial model data".

The Fukuhara et al patent teaches generating initial model data in the analogous art of passive position measuring systems, col. 1.

CAy It would have been obvious to one of ordinary skill in the art at the time the invention was made to include means for generating initial model data for the ranging systems of Gendreu or Rawicz as Fukuhara teaches that an initial estimate of model data is necessary in the convergent computing process of position determining.

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5. Claims 10 and 30 are rejected under 35 U.S.C. 103 as being unpatentable over Gendreu or Rawicz in view of Newell et al and Golinski.

The difference between the instant claims and The Gendreu or Rawicz prior art are passive collecting of actual flight data and calculating a perturbation model.

Golinski teaches that a passive ranging system may be advantageous over active systems if it is desired to not be detected by third parties or the target plane itself.

Newell et al teaches a target course prediction system utilizing a perturbation model to smooth out computer positional quantities for avoiding amplified noise errors, col. 5, line 54 thru col. 8, line 52.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to calculate a perturbation model as taught in Newell et al with the range determination process of Gendrea or Rawicz in order to smooth out the model data to reduce errors.

Further it would have been obvious to one of ordinary skill in the art at the time the invention was made to collect actual flight path data with passive means as taught in Golinski in the ranging systems of Gendreu or Rawicz in view of Newell et al because of the advantage of avoiding detection by third parties or the target itself as might occur with active means.

6. Claims 5-9, 11-14, 16, 18-19, 25-29, 31-34, 36 and 38-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten

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in independent form including all of the limitations of the base claim and any intervening claims.

7. Applicant's amendment necessitated the new grounds of rejection. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a).

8. This communication is from the examiner assigned to the case, Gilberto Barron Jr. at (703)557-4926.

Barron/ajh-7  
07-03-89

GILBERTO BARRON, JR.  
EXAMINER  
ART UNIT 222



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